

### **ABSTRACT**

The present invention relates to an environmentally benign process for the simultaneous preparation of nanocrystalline anatase titanium dioxide and hydrazine monohydrochloride, in substantial amounts from the acidic aqueous titanium tetrachloride solution by reacting with hydrazine monohydrate at ambient conditions of temperature and pressure. The process of the present invention is simple, easy to operate, pollution free, high in product purity and homogeneous in product particle.